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**Exploring how consumer cooperatives might strategically incorporate
social media to distribute wine**

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This research advances our understanding of disruptions to marketing channels in the digital world by investigating the viability of consumer cooperative systems which are envisioned as multi-actor constructed networks using Social Media (SM) platforms. It introduces the concepts of “social media consumer wine cooperator” as a new distribution channel for wine and investigates the consumer’s intention to participate in an SM and become a wine cooperator. Relying on the Uses and Gratifications Theory (UGT), we adopted a quantitative research inquiry with data gathered using an online survey involving a sample of 486 French consumers. We empirically tested the relationships among four factors: attitude towards buying wine based on SM recommendations, perceived risks, intention to buy wine on SM, and consumer intention to become an SM wine cooperator. Findings indicate that the intention to be an SM wine cooperator is positively correlated with attitude towards buying wine

based on SM recommendations and the intention to purchase wine on SM. To finish with, we link the concept of the consumer wine co-op to the current debate in the literature on centralized versus decentralized (built on top of blockchain networks) social media platforms, opening the door for future research avenues.

Keywords: consumer cooperative; wine cooperator; distribution; social media, perceived risk; intention to buy wine online; small producers blockchain.

1. INTRODUCTION

Buying and selling wine are complex processes due to uncertainty in product, brand, or distribution channel choice affecting both producers and consumers (Di Vita et al., 2019; Pelet et al. 2017). For producers, distribution channels have been proving particularly difficult to navigate. Steinman (2020, p. 870) noted “in recent decades the restrictions on chain stores have been almost entirely removed, and market concentration in grocery retail has grown rapidly.” This liberalization of the market has resulted in substantial harm to food and wine producers, especially small- and mid-scale enterprises (SMEs), due to massive competition (Dressler and Paunovic, 2022). In addition, the large wine players are dominating the distribution channels and tend to consolidate with each other, which forces SME wine producers to rethink their distribution tactics if they want to stay in business. Given their marketing budget constraints and limited staff, most SME wine producers cannot compete in a broader market using traditional distribution outlets.

The wine industry has also been slow to innovate in the arena of distribution channels. Prior research has addressed the types of strategies wine businesses use to survive. Dressler and Paunovic (2022) clarified that innovations in the wine sector occur in a climate of scarce resources and more often manifest as ‘frugal innovation approaches’ (see also Dressler, 2013; Petrović et al., 2015). Frugal innovation focuses on increasing back-end production volumes and lowering product and distribution costs (Altmann and Engberg, 2016). Upstream innovation in food production companies usually takes place through capital goods and equipment investment and through vertical cooperation and partnerships, e.g., equipment sharing (Capitanio et al., 2010). Alternatively, downstream oriented companies typically leverage modern tools of

communication, such as social media (SM), to capitalize on end-user and service innovations (Dressler and Paunovic, 2022). However, even though alternative distribution channels such as e-commerce exist, extant studies have debated on the viability of selling wine online. Pelet and Lecat (2011; 2014) argue winemakers feel uncomfortable to sell wine on the Internet because they are not convinced about the ROI and perceive certain risks. Among the risks, the unpredictability of social interactions and sharing of experience/expertise were underscored.

Nonetheless, Leigon (2011) states that SM fulfils an important function in wine selling since recommendations from friends, colleagues and family are valuable in influencing wine buying behavior. SM is also used to provide consumers with information to reduce risks associated with wine purchasing (Atkin & Thach, 2012). For example, Sogari et al. (2017) found that Italian wine drinkers' buying behavior was influenced by SM (e.g., Facebook pages, YouTube videos, Twitter accounts) and that SM inspired consumers to pay more for wine they thought was environmentally sustainable. However, there are not yet any studies that investigate how SM can be deployed as a full-blown distribution strategy, rather than merely a marketing enhancement.

In order to proceed in this vein, we turned to sociological literature on consumer food co-operatives (co-ops). The food co-op model arose when market forces threatened to violate consumers' social values, e.g., big box dominance in grocery sectors was seen to be reducing food quality and increasing prices (Haedicke, 2012). Consumer co-ops represent an opportunity to innovate strategically, especially given the ubiquitous presence of digital technology and SM. SM can support consumer-based co-ops in unique and advantageous ways. Consumer wine cooperators using social media could be the solution for SME producers, granting them access to larger markets and increasing their revenues while bringing quality wines to the cooperators at a lower price than traditional retailers would be able to provide.

The primary objective of the paper is to introduce the 'social media consumer wine cooperator (co-op)' as a new distribution channel for wine. By leveraging both consumer cooperatives and SM, SME vendors can build interpersonal relationships with co-op members and obtain information that is difficult to access on general websites. Given the potential benefits of downstream strategic innovation, prior success of consumer co-ops as a strategic model in the food industry, and driving forces (e-commerce) disrupting distribution of wine, we address two research questions:

Q1. How might consumer cooperatives strategically incorporate social media, using the wine industry as a test case?

The second objective of this paper is to report on the findings of an empirical investigation on consumers' intentions to participate and buy wine from a hypothetical SM wine co-op, using data from an online survey of 486 French consumers. This second objective is based on theoretical relationships established in uses and gratifications theory (UGT) (e.g., Dholakia et al., 2004; Eighmey and McCord, 1998). We explored consumer attitudes towards SM as drivers of potential participation in an SM-supported wine consumer co-op. This is depicted in our second research question:

Q2. Do attitudes towards SM and perceived risk of/intentions to buy wine online impact potential participation in an SM-supported wine consumer co-op?

The remainder of the paper is structured as follows: theoretical underpinnings are offered that form a justification for an emerging concept of a SM wine co-op, along with reasons why a consumer would participate in a wine co-op. Then the methodology of the empirical investigation and results follow. Finally, a discussion of implications and limitations draws the paper to a close. Our future research agenda articulates the paper's theoretical relevance (in advocating for an SM wine co-op) to the emerging debate in the literature on decentralized (built on top of blockchain networks) versus centralized SM platforms.

2. THEORETICAL BACKGROUND AND RESEARCH MODEL

2.1. A social media supported wine co-op concept

The term co-operative is defined by the International Co-operative Alliance as “*an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise*” (ICA, ica.coop). Drawing on the literature, Mikami (2003) examined how market power can affect the form of organizations. The author classified organizational forms according to their ownership structure into firms owned by suppliers of physical capital (capitalist firms), firms owned by employees (employee firms), and firms owned by customers (consumer cooperatives).

The concept of traditional producer-side wine co-operatives is well-known in countries such as France, Italy, Spain and Portugal. For example, there are currently around 600 wine co-operatives, (*caves coopératives viticoles*) in France, which

represent around 30% of the total French market in volume. Hence, French wine consumers rely on the latter to buy their bottles, especially when the co-ops are located in their trading area. Traditional agricultural cooperatives (among producers) are undergoing structural change in France (Saisset, 2016). Producer co-ops are small and medium enterprises (average annual turnover of 9 to 10 M€), according to the Agricultural Cooperation and Cooperating Winegrowers (Boueilh, 2022). They are somewhat limited in their production and marketing methods (Saisset and Ceccaldi, 2020) but a wind of change seems to be blowing over co-ops and wine, with the digitization of society.

In this paper, the focus will be on an alternative concept, consumer co-ops supported by SM, where consumers and producers will collaborate to distribute wine. Research on consumer cooperatives is not new (Hall and Hall, 1982). As Nilsson (1985) explains, the welfare-enhancing effect of consumer cooperatives depends on which paradigm of cooperative theory is used. According to cooperative ideal type theory (Cook and Grashuis, 2019), consumer cooperatives are the best possible spokespersons for consumers in the marketplace. Our research is not concerned with the reasons for the creation of firms owned by individuals who are not the investors in the firm, but primarily with the extension of the mechanisms of consumer cooperatives through social media, using the wine industry as a test case. We rely on what Hunt et al (2022, p. 140) describe as the “marketing manifesto”. The marketing manifesto developed, amongst other things, from marketing’s “reliance on borrowed concepts, frameworks, and theories” and the sociology of academic disciplines to serve as the theoretical foundation to provide renewal insights (Hunt et al., 2022, p. 145). Furthermore, we believe that testing the concept of consumer cooperatives leveraging social media in the context of the wine industry provides useful insights for scholars and practitioners. Similar attempts to improve the understanding of consumer cooperatives can be found throughout the literature. For example, Ajates Gonzalez (2017) draws on recent thinking about the multi-stakeholder cooperative movement in food and agriculture, collects data from two multi-stakeholder cooperatives in Europe, and places them within a framework the author calls the open cooperative model.

Consumer co-ops are an advancement of consumer roles and can be supported by digital assets offered on smartphones, such as SM. Hanna et al. (2011) pointed out that SM can inspire and energize consumers to develop into active participants in the media process. Tafesse and Wien (2018, p. 3) emphasized that the major “marketing

implications of the SM functions are that wholesalers should facilitate tools for users’ self-promotion, monitor and influence online conversations, develop content management systems and facilitate real-time and intimate interactions with customers.”

Our research explores the practical application of an online network of engaged SM wine co-op members, some who process sales and others who make wine purchases using the co-op’s SM platform, following a group buying model. Examples of group buying are sites like Meituan, Pinduoduo, and JD Pingou (Sun, Zhang & Huang, 2021). Affordable pricing can attract consumers initially, but it is the sense of community that encourages consumers to spend their time and mental energy on the platform. Group buying increases the purchasing power of consumers, particularly in the case of agricultural products (Yu et al., 2022). A co-op can exist for a single winery or for a collection of wineries coordinating their distribution efforts. We represent our conceptualization of the SM wine co-op in figure 1.

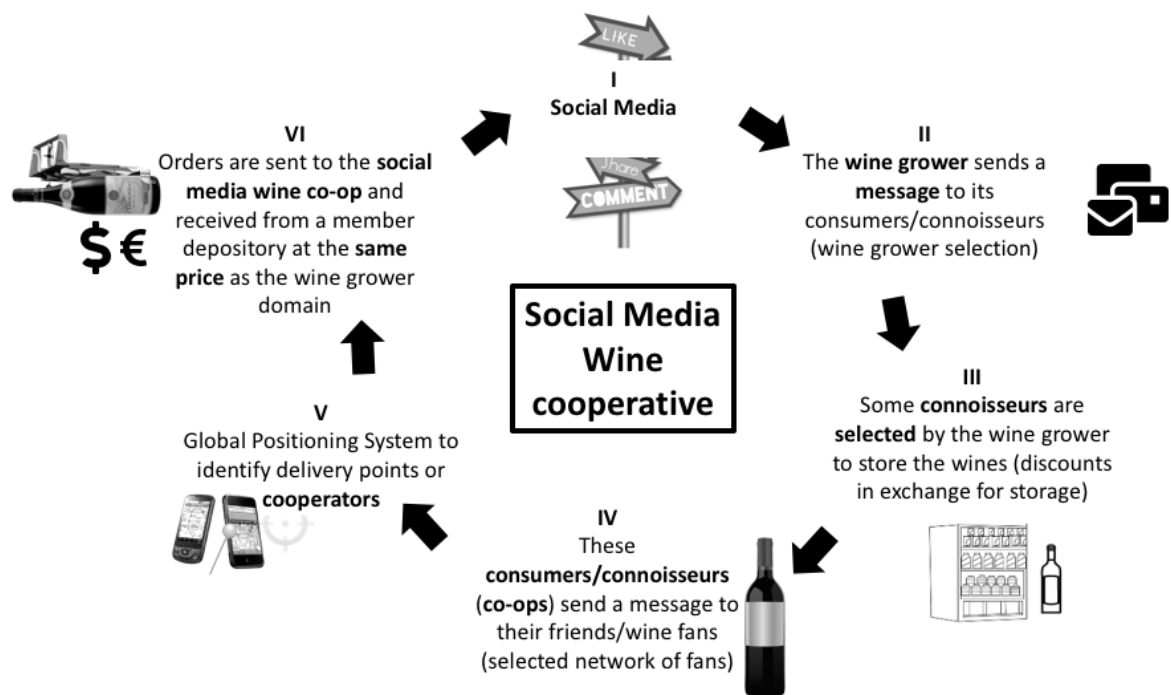


Figure 1: Conceptualization of a consumer wine co-op made possible through SM

For the purposes of this paper an SM wine co-operator is defined as an individual who a) is knowledgeable about wines; b) possesses potential physical space to handle and store wine with stable humidity, light and temperature to share with the cooperators (only the cooperators who will become ‘pick-up site hosts’ need a physical

space for storage, see below); c) is engaged, motivated and willing to share her/his wine knowledge in an ecosystem with other consumers; d) is familiar with the use of SM platforms; e) is willing to sell wine subject to specific requirements related to price, delivery and risk management; and f) makes use of crowd logistics to fulfil orders.

Each co-op member must create a profile on SM. An SM platform can be centralized or decentralized (federated network that fosters independence without a central authority using blockchain technology). For simplicity, we limit our presentation in this section to centralized SM platforms, e.g., Facebook and Twitter. We extend our discussion on decentralized SM platforms later in the future research agenda. Some members apply for and are selected as ‘pick-up site hosts.’ When purchasing, the co-op member indicates his/her SM identifiers, and a list of potential ‘pick-up sites’ is proposed. The consumer chooses the location closest to him/her or the most convenient for pick up or the one perceived to be the most reliable, based on online ratings. Payment preferences can be indicated upon registration or checkout. An estimated availability schedule is provided for buyers to collect their orders, based on a group purchase level being met. The producer is then notified to shift inventory to the pickup site. This system would allow the consumer to obtain wines at prices similar or close to those on the estate, because the cost of insurance, shipping, etc., is for the producer. Co-op buying would help to increase sales and cover underserved areas in terms of physical distribution. This system is made possible by a global positioning system (GPS) interface available on SM that allows a view of the location of all the wine co-op sites acting as custodians for co-op sales.

Our research applies uses-and-gratifications theory to advance the understanding of why people join consumer cooperatives. This is further detailed in the next section. Cooperatives can maximize the use of social media platforms as entertainment as well as community-building, and can offer incentives to members as part of special treatment strategies.

2.2. Consumer attitudes that impact participation in a SM wine co-op

Intention to participate in a SM wine co-op is the dependent variable in the empirical portion of our study. Given that the co-op is envisioned as relying on the use of social media to effect wine purchases, we have adopted the Uses and Gratifications Theory (UGT) to attempt to explain consumer participation in a wine co-op and our associated hypotheses. UGT has been used to understand theory of mass

communication with (1) radio and (2) World Wide Web (Eighmey & McCord, 1998) and (3) virtual or online communities (Dholakia et al., 2004). It has also been used to explain participation on SM platforms, such as digital photo sharing using Facebook (Malik et al., 2016), Instagram (Sheldon and Bryant, 2016), Twitter use (Chen, 2011; Phua et al., 2017), Facebook (Krause et al., 2014; Phua et al., 2017), YouTube (Khan, 2017) and Pinterest (Mull and Lee, 2014).

2.2.1. Attitude towards buying wine based on SM recommendations

Consumer gratification from SM originates from the “participatory, collaborative, personal, and simultaneously communal” nature of SM (Tsai & Men, 2017, p.3). Chen et al. (2020) concluded that the exponential growth in media such as SM is a further guarantee of social gratification from such new media. Shareef et al. (2019) found that source credibility influenced consumers’ attitudes towards SM. In this study, attitude towards buying wine on SM was measured using multiple items recording respondents’ feelings about buying wine on SM based on friends’ and SM users’ product recommendations.

UGT predicts that a specific medium such as SM will be favored in specific situations as a means to satisfy wants or interests (Keeling, Macaulay & McGoldrick, 2007) and is therefore a justification for the use of SM for wine distribution. Furthermore, Pucci et al. (2019, p. 275) found that “SM usage is positively related to online wine buying, and consumer’s objective and subjective knowledge moderates the relationship between SM usage and online wine purchasing.” The following hypothesis is proposed:

H1: There is a positive association between attitude towards buying wine based on SM recommendations and the intention to buy wine on SM

2.2.2. Perceived risk of buying wine online

Perceived risk is defined as the uncertainty that consumers perceive when they buy a complex product and cannot foresee the consequences of their purchase decisions (Schiffman, Wisenblit & Ramesh Kumar, 2018). The level of uncertainty may concern

the choice of product, brand, store or distribution channel (i.e., retail shopping or online shopping). Extant literature (e.g., Loureiro, 2003; Mueller et al., 2010, Bonn et al., 2016) has identified a variety of perceived risks that consumers consider when they purchase wine. Wine has limited search properties, many potential experiences and a few credence properties. Mitchell and Greatorex (1989, p. 34) identified four types of risk associated with wine-buying behaviour: “functional (taste), social (family and friends), financial (price), and physical (hangover or reaction to the wine).”

SM has a role in alleviating perceived risks of buying wine online. It has been found that Facebook fans of a particular brand display intense intentions to repurchase more than fans not using Facebook (Szolnoki et al., 2014). Mitchell and Greatorex (1989) noted that seeking information from sources such as family or friends is the most important risk-reduction strategy. Edwards and Mort (1991) also stated that opinion leaders have the ability to provide a valuable flow of communication to opinion followers, thereby reducing the perceived risks attached to the adoption of new products or behaviors. Customers co-create value on SM and reduce risk perceptions by enthusiastically sharing personal experiences, encounters with staff, photos, reviews, and tips on how to utilize a product and suggestions on product uses not found in user manuals. Typical examples of the latter relevant to the wine sector could relate to tasting notes, written brand reviews, or publishing blogs about wineries or cultivars as well as video and pictures relating to wine. Such examples suggest a mediating role of SM in our model. We believe that people might actively pursue risk reduction by seeking SM recommendations. The following hypotheses are proposed:

H2a: There is a positive association between perceived risk to buy wine online and attitude towards buying wine based on SM recommendations.

H2b: Attitude towards buying wine based on SM recommendations has a mediating effect on the relationship between perceived risk to buy wine online and intention to buy wine on SM.

2.2.3. Intention to participate in an SM wine co-op

Intention to participate in an SM wine co-op is an expression of consumer engagement. Consumer engagement is defined as “a customer’s motivationally driven, volitional investment of operant resources (including cognitive, emotional, behavioural,

and social knowledge and skills), and operand resources (e.g., equipment) into brand interactions” (Hollebeek, Srivastava and Chen, 2019, p.166). Consumer engagement manifests in a variety of behavioral outcomes, some involving accessing or posting SM site content. Content retrieving can involve things such as comments, suggestions for use, viewing of photos or videos and other items created by other customers. Customers can also put their own creations online.

Shawky et al. (2020, p. 568) affirm, “SM have become pervasive communication tools, creating connections and opportunities for customer engagement. They have redefined simple dyadic interactions between customers and marketers, transforming them into more complex interactions between multiple groups of actors, including customers, organizations, stakeholders, and non-customers.” The basic motivations to engage with a community via SM are to integrate and socially interact with other customers as well as to find information they seek (Chiang, Wei, Parker and Davey, 2017; Fehrer, Woratschek, Germelmann and Brodie, 2018).

Morgan-Thomas et al. (2020, p.714) report that contemporary studies in ecosystem scholarship show that “engagement may form in various digital contexts in which individuals and technologies actively contribute to the workings of a broader ecosystem.” The operational measure of consumer engagement in this study is the respondent’s intention to participate in an SM wine co-op. Among the listed gratifications obtained in Social Networking Sites (SNS) context, there are interpersonal utility, incentive seeking, entertainment seeking, information acquisition, convenience seeking and brand likeability (Sung *et al.*, 2010). In our study, we captured general attitudes towards buying wine on SM (Lo and Leung, 2009). This was an antecedent variable in our model explaining participation in an SM wine co-op. The following hypothesis is thus proposed:

H3: Attitude towards buying wine based on SM recommendations is positively associated with intention to participate in an SM wine co-op.

2.2.4. Intention to buy wine via SM

UGT theory identifies users’ motivations and factors that underlie the popularity of SM as one of the preferred means for online shopping (Betzing et al., 2020; Dolan et al., 2019; Ozanne et al., 2017; Vale & Fernandes, 2018). SM enables complex

interactions between multiple groups of participants such as customers, organizations and stakeholders (Larivière et al., 2017; Shawky et al., 2020). Scholars have reported on the interactive experiences that take place among various actors that have been made possible by SM (Brodie et al., 2013; Larivière et al., 2017; Li et al., 2017). Shawky et al. (2020, p.568) state that “SM have transformed the role of a customer to that of an organization through facilitating customers’ contributions in creating and sharing information, photos, reviews, and other marketing resources.” The ability of SM to connect informed customers makes it a suitable and viable means to construct a digital network for wine co-ops. SM can play a role in the business activity and enable online users to participate in the marketing, selling, comparing, buying, and sharing of products and services (Cao and Li, 2020). In this study, intention to buy wine via SM was measured and served as a precursor to participate in an SM wine co-op.

H4: Intention to buy wine on SM is positively associated with intention to participate in an SM wine co-op.

The proposed model for intention to participate in an SM wine co-op is presented in Figure 2.

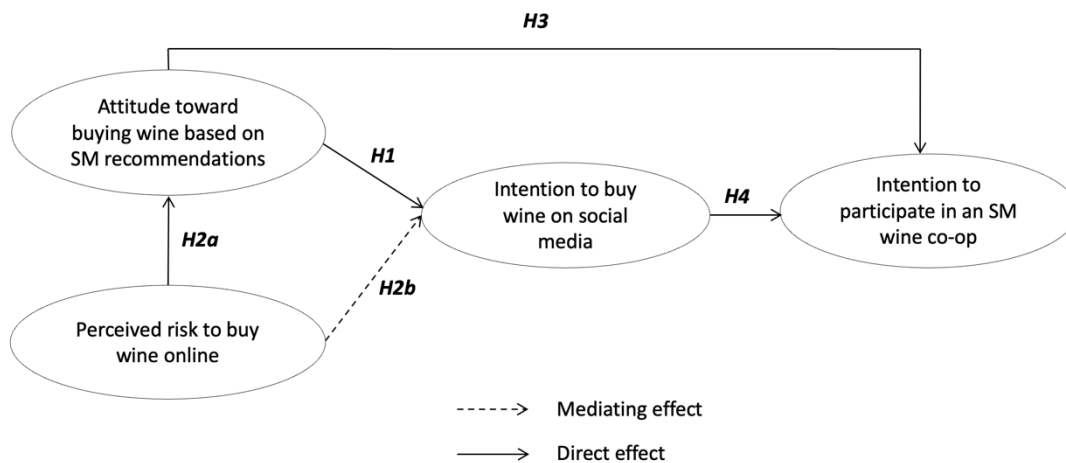


Figure 2: Research model

3. METHODOLOGY

This study used an online questionnaire with a sample (486 respondents). Structural equation modeling was used to test a set of hypotheses related to explaining propensity to participate in an SM wine co-op.

3.1 Measurement of constructs

The constructs were measured using multi-item scales adapted from various sources: perceived risk (Garbarino and Strahilevitz, 2004; Kim et al., 2008); attitude towards buying wine based on SM recommendations (adapted from Garbarino and Strahilevitz, 2004); and intention to buy wine via SM (Limayem and Rowe, 2006). Based on Figure 1, intention to participate in an SM wine co-op was evaluated through a scenario presented to respondents (see Appendix 1). All items were measured on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5).

3.2 Data collection and sample

An online survey was used to collect the data. A pre-test of the questionnaire was conducted on SM among 10 students and two researchers, using Facebook. The purpose of the pre-test was to test the items in the questionnaire for face validity with individuals who were identified as existing wine consumers or being knowledgeable about digital marketing. Potential subjects for the main sample were identified in the researchers' networks, including students and professional contacts. They were our respondents which corresponds to a convenience sample for our survey. The sample was initially screened for legal drinking age. The collection period started in March 2022 and ended in May 2022, covering a period of around 2 months. The Facebook platform was used as the data collection tool since it is the most popular social media that wineries use to increase brand awareness and reach new potential customers (Obermayer, 2022).

This study was aimed at analyzing consumers' wine-buying behavior via SM. It was limited to France because the authors are familiar with French wine regulations. Most countries have extensive legislation to regulate sales of alcoholic beverages. In some countries, such as the United States, Canada or Scandinavian countries, it will not be possible to have an SM wine co-op as part of the marketing channels due to the state monopoly of distribution or the three-tier system in the USA. A total of 486 valid questionnaires were collected from French wine consumers. Forty-five percent of respondents were males and average age was 30 years old (Table 1).

Table 1. Characteristics of the sample of respondents

Demographic factor		Frequency	Percentage
Gender	Male	221	45
	Female	265	55
	Total	486	100
Age	18 to 24	82	17
	25 to 34	257	53
	35 to 44	68	14
	45 to 54	41	9
	55 to 65	38	7
	Total	486	100
Education	Bachelor	197	41
	Master	253	52
	Ph.D.	36	7
	Total	486	100
Occupation	Student	77	16
	Employee	157	32
	Retailer	17	4
	Senior Executive	235	48
	Total	486	100

4. RESULTS

4.1 Common method variance and non-response bias

We performed Harman's single-factor test on the multi-item scales to examine common method bias in a self-administered questionnaire survey (Fuller et al., 2016). The test showed that the explained variance was 40.86%, which is below the threshold value of 50% (Malhotra, Kim, & Patil, 2006), indicating that common method bias was not a significant problem in this study. Non-response bias was examined by comparing early and late responses (Armstrong & Overton, 1977). We performed an independent t-test to compare the means of two groups. The results showed no statistically significant difference ($p > .05$). Thus, non-response bias was not considered to be a problem in this study.

4.2 Measurement model

Confirmatory factor analysis (CFA) was performed to ensure that the measures of all the constructs were reliable and valid. Factor loadings for all items were above the threshold of 0.5 (Bagozzi and Yi, 1988), indicating that all observable indicators loaded significantly on their respective latent variables (Table 2). Cronbach's alpha (α) and

composite reliability (CR) values were above .80 (Table 3), which was acceptable according to the minimum threshold of 0.7 for scale reliability (Hair et al., 2017). Convergent and discriminant validity were then assessed. According to Fornell and Larcker (1981), convergent validity indicates the extent to which assessment measures correlate with other measures to which they should relate. Convergent validity exists when the average extracted variance (AVE) is greater than or equal to 0.5 (Fornell and Larcker, 1981). As shown in Table 2, the AVE values of each construct in this study extracted more than 50 percent of the variance. Discriminant validity is established since the square root of the AVE scores are higher than the correlations coefficients for each pairwise construct (Table 3), indicating that the constructs measure distinct concepts. In addition, the values of the fit indices are above the minimum thresholds (Bagozzi and Yi, 1988; Hair *et al.*, 2017): RMSEA= .04 (less than 0.08), SRMR = 0.03 (less than 0.04), GFI = 0.95 (> 0.9), AGFI = 0.93 (> 0.9), TLI= .99 (> 0.95) and CFI= .99 (> 0.95), $\chi^2= 136.61$, $df= 59$ ($\chi^2/df = 2.35$ (less than 3), $p \leq 0.001$). Thus, the fit indices confirmed an adequate fit of the measurement model to the data.

Table 2. Descriptive statistics and average variance extracted from constructs

Construct	Items	Factor loadings	Mean	SD	AVE
Attitude toward buying wine based on SM recommendations	1. I like the idea of buying wine on the recommendations of friends/social media followers	0.85	3.22	1.14	0.72
	2. Making use of social media to buy wine based on friends' recommendations/social media followers would be a good idea	0.82	3.18	1.11	
	3. The idea of buying wine based on friends' recommendations/social media followers (private sellers) is tempting	0.87	3.20	1.12	
Perceived risk towards buying wine	1. I'm sure that I will be taking a risk if I buy wine online	0.80	2.39	1.08	0.72
	2. I feel that buying wine online will cause inconvenience if something goes wrong	0.82	2.42	1.12	
	3. I'm sure that I will make a mistake if I buy wine online	0.92	2.35	1.10	
Intention to buy wine on SM	1. I intend to buy wine based on friends/social media followers' (private sellers') recommendations	0.88	2.89	1.12	0.77
	2. In the future, I'll probably buy wine based on friends/social media followers' (private sellers') recommendations	0.86	3.02	1.13	
	3. In the future, I will buy wine based on friends/social media followers' (private sellers') recommendations	0.90	2.93	1.12	

Intention to participate in an SM wine co-op	1. Social media wine co-op is realistic for buying wine in France	0.74	3.37	1.01	0.51
	2. I am willing to take part in this social media wine co-op as a consumer	0.81	3.19	1.08	
	3. I am willing to take part in this social media wine co-op as a wine pick up point	0.60	2.79	1.18	
	4. Trust in the social media wine co-op is guaranteed if people who store the wine are selected by the wine-growers	0.68	3.35	1.05	

Table 3. Reliability, convergent and discriminant validity

	<i>α</i>	<i>CR</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
(1) Attitude toward buying wine based on SM recommendations	.89	.98	.85			
(2) Perceived risk	.88	.98	.14	.85		
(3) Intention to buy wine on SM	.91	.98	.62	.40	.88	
(4) Intention to participate in an SM wine co-op	.80	.88	.43	.21	.46	.72

Notes: Values on the diagonal (in italics) are square root of AVE scores; values below the diagonal are the correlations coefficients between constructs.

4.3 Hypothesis testing

Structural equation modelling is an appropriate tool used to test an explanatory model (Hair et al., 2017). In this study, AMOS Version 24 was used and we adopted a maximum likelihood estimation method. The overall fit of the structural model was assessed: RMSEA = .05, TLI = .97, CFI = .98; $\chi^2/df = 2.28$, $p < .001$, which demonstrated a satisfactory fit of the proposed model to the data.

Regression coefficients showed that attitude towards buying wine based on SM recommendations had a strong positive effect on intention to buy wine on SM ($\beta = .86$, $t = 18.69$; $p < .01$). Perceived risk to buy wine online is positively associated with attitude towards buying wine on SM recommendations ($\beta = .10$, $t = 2.75$; $p < .01$). The bootstrapping procedure with 5000 subsamples was performed to test the mediating effect of attitude towards buying wine on SM (Hayes, 2013). Results indicated that perceived risk had a direct effect on the intention to buy wine on SM ($\beta = .11$, $t = 3.15$; $p < .01$), and an indirect effect through attitude towards buying wine on SM recommendations ($\beta = .07$, LLCI = 0.01, ULCI = 0.14; CI = 95%). The Sobel test was also significant ($Z = 3.12$, $p < .01$), indicating that attitude towards buying wine on SM recommendations mediated the relationship between perceived risk regarding

purchasing wine online and the intention to buy wine on SM. The mediating effect was partial since the direct effect of perceived risk on intention to buy wine was significant ($p < .01$). Hence, H1 and H2a-b were statistically supported. H3 and H4 stated that the intention to participate in an SM wine co-op is positively associated with both attitude towards buying wine based on SM recommendations and the intention to buy wine on SM. As expected, the intention to participate in an SM wine co-op is positively associated with the attitude towards buying wine based on SM recommendations ($\beta = .23, t = 2.51; p < .01$) as well as the intention to purchase wine on SM ($\beta = .28, t = 3.14; p < .01$). Hence, H3 and H4 received statistical support. The results of the hypotheses tests are summarized in Figure 3.

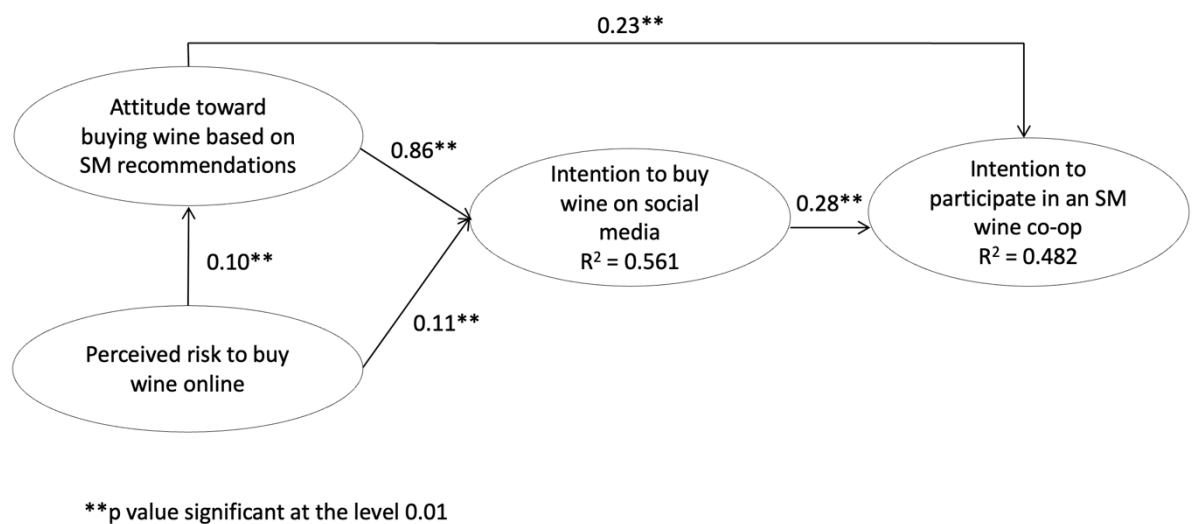


Figure 3: Results of the hypotheses tests

5. DISCUSSION

The purpose of this research is to introduce the SM wine co-op as a new wine marketing channel. Data was collected to determine how a sample of consumers would feel about participating in an SM wine co-op, testing specific explanatory factors (attitude towards buying wine based on SM recommendations, perceived risk of buying wine online, and intention to buy wine using SM). Together, both attitude towards buying wine based on SM recommendations and perceived risk explained 56% of the intention to buy wine on SM, which suggests that these two variables are quite useful in understanding what motivates people to buy wine on SM. The intention to buy wine on

SM is a positive predictor of the intention to participate in an SM wine co-op; it represented almost half ($R\text{-squared} = 0.219$) of the explained variance (48%) regarding why respondents would participate in an SM wine co-op. Since mean respondent ratings were above the midpoint of a five-point scale, our findings signal the importance of recommendations for buying wine received from SM contacts, e.g., friends and other users of SM. Given these results, marketing efforts that provide consumers with access to electronic word of mouth (e-WOM) via SM are deemed to be fruitful.

Next, we consider more deeply the role of SM in alleviating perceived risk of buying wine online. SM enables publishing blogs about wineries and sharing personal experiences related to tasting notes for example. Firstly, we found positive relationships between risk and attitude towards buying wine based on SM recommendations and between risk and intention to buy wine on SM. This means that as risk perception rises, gratification from SM rises also, signaling that people with the most risk would benefit the most from recommendations about wine on SM. Secondly, that perceived risk (measured in terms of buying wine ‘online’) had a positive direct effect on intention to buy wine on SM, means that using SM to buy wine might be viewed as a less risky channel during the purchase process than other e-commerce options, e.g., online wine stores. Moreover, the attitude towards buying wine based on SM recommendations clearly mediated the relationship between perceived risk and intention to buy wine on SM. The effects of perceived risk were distributed in a balanced manner between direct and indirect effects on the intention to buy wine on SM.

5.1 Theoretical implications

This study makes various contributions. First, it improves our understanding of disruptions to marketing channels in the digital world by investigating the setting up of consumer cooperative systems (wine co-ops) which are envisioned as multi-actor ecosystems constructed using popular social media platforms. In short, it contributes to the marketing literature by introducing a tested role of SM in furthering the usefulness of customer-cooperatives. Our findings are in line with the work of Wilkinson, who commented that over time “the flow of marketing activity shapes the organizational structure of the channel” (1990, p.18).

Secondly, this study furthered country specific research on SM and web marketing strategies in the wine sector, which is important because strategies will vary

across countries, largely because of differing legislation and regulations for wine (Begalli, Codurri & Gaeta, 2009; Bouquet, 2012). The adoption of SM and web marketing strategies has been successful in Portugal, where an appropriate network has improved a wholesaler's position by creating partnerships with small traditional shops (Mota, De Castro, and Brito, 2016). Our results support Mota et al. (2016), i.e., in seeking strategic alternatives using SM, at least for domestic distribution in France.

Third, this study supports prior work in operations management, where researchers have made significant advances in research on group buying, e.g., Cao & Li, (2020), who analyzed the referral behavior of group buying consumers using SM. They found the perceived risks related to traditional online channels (e.g., Amazon) will not necessarily be the same when shopping via SM platforms. Our study extends these findings by suggesting that a consumer who is unwilling to buy wine through an online wine store site might buy it through SM since positive attitudes towards buying wine based on SM recommendations reduces perceived risk. In addition, group buying can significantly reduce the price of a bottle of wine when compared to the traditional wine shop/brick-and-mortar mark-up (higher operating costs, especially rent) or online shopping add-ons (cost of shipping). It is a win-win situation because the SM wine co-op centralizes everything.

Fourth, we confirm prior findings that SM communication capabilities are essential to a wine marketing channel. Direct communication with all stakeholders about wine experiences is a fundamental factor that will contribute to both financial and social performance through cooperation. Wolf, Wolf and Lecat (2020, 2022) dealt at length with the impact of COVID-19's effects on wine consumption and provided a foundation for the role that an SM wine co-op could play in the digital world. Wolf et al. (2020, 2022) stated that, since wine consumers were restricted to shelter in place (in California), 74% of wine consumers shared their wine consumption activities with friends and families by participating in virtual happy hours. Our findings suggest that the SM wine co-op offers social belonging and comradery around one's personal interests in wine.

5.2 Managerial implications

The results of this study are important for the wine industry and its consumers, as well as any sector that comprises many small and medium-sized enterprises with high

costs and barriers to penetrate the traditional distribution. Wine producers who produce a small volume of wine cannot achieve economies of scale and are unable to promote their wines in the traditional media or traditional distribution channels because of high promotion and advertising costs or simply lack of product necessary for wholesaler contracts. Consolidation in many wine markets is a direct consequence of the aforementioned challenges facing small-scale producers. Moreover, local shops that tried to promote small producers have disappeared, or their activities have been taken over by other stakeholders in the supply-chain. The power of large retailers in the grocery markets is evidence of this shift of power within marketing channels.

In order for wine producers to meet the challenges of the evolving digital market space, new generations of consumers, and the ins and outs of pandemic restrictions, it is necessary to implement the best practices the industry can offer. To achieve the aforementioned practices, a firm must be in touch with its loyal consumers through building a community of like-minded wine lovers, in order to facilitate the sharing of experiences that impart a richer appreciation of wine. This includes adapting distribution processes continuously.

For an SM wine co-op to be successful, there should be sufficient numbers of friends and members to make the network profitable. At the same time, however, the co-op should generate trust with the wine producers, so that they are willing to ship product to the SM wine co-op for dissemination among co-op clients. Although the findings of the survey indicate that respondents are positive about forming an SM wine co-op, it is important to point out potential pitfalls that they might encounter. Even though SM wine co-ops may generate more sales for SME wine producers, compared to the volume-based distribution methods (department stores and grocery stores), various barriers must be overcome. The potential areas of conflict and/or problems known in wine distribution include: a) quality control (e.g. cork-tainted wine, damage), b) storage with temperature control, c) forgery, d) insurance, e) complaint handling, f) taxation and g) cost of delivery.

The combining of SM with e-commerce functionality allows producers to promote their wine directly to consumers in a setting that duplicates communalities found in sharing economies. E-commerce platforms that promote and put consumers and wine retailers in contact do exist (wine-searcher.com, for example), but are not as popular as the interactive Tripadvisor-like websites, which promote wine from users to

users mainly through comments and ratings (for instance, Cellartracker or Vivino). This is illustrated by the text of an article from the Wall Street Journal (Teague, 2015, p. 1), i.e., that *“a lot of mediocre wine is being sold on the basis of a story: so many millennials are interested more in the narrative of the wine rather than the wine.”*

6. CONCLUSION

Technological developments have led to an ongoing reformation of marketing channels. Moving marketing communications to SM platforms has resulted in both new forms of consumer co-production and an increase of task choices available to consumers. This research introduces the SM wine co-op, which inherently highlights the creation of new business models aligned with emerging networking capabilities. The tremendous liberalizing of the market has dealt significant harm to food producers, especially small- and mid-scale food producers. The same is seen in the wine industry, and co-ops might reveal to be a wall of protection for small producers. The wine consumer co-op makes lesser-known quality wines from small producers accessible to all the social wine cooperators. Given that the small producers cannot afford to spend substantial amounts of money to market their wine(s), they must rely on the social wine cooperators to promote their wines. The interaction among the wine cooperators promotes honesty when product information is shared. This opinion can also be substantiated by the view that it is likely that wine co-op members will also be more likely to be “wine enthusiasts”.

Considering limitations, despite the promise of co-ops in the digital economy (De Peuter, de Verteuil, and Machaka, 2022), the literature cautions against viewing them as a panacea: they remain entangled with the very economic paradigms, systems of social exclusion, and cultures of work that many co-ops seek to transform. In addition, applying the SM wine co-op concept to other countries is not easy since restrictive practices may regulate alcohol marketing and sales outlets. Since the current research has been conducted in France, the generalization of the findings to other neighboring European countries might be more challenging. It would be impossible to implement in State Monopoly country such as Scandinavian countries or Canada or in the United States with their three-tier system.

In our work, the specific role of social media remains conceptual. This is because we focus on the concept of purchasing through these media and do not aim to

provide a step-by-step explanation for management or recommend which social media platforms work better. Thus, one of the limitations of our work is that it does not specify the exact role and function of social media but rather its promise as a marketing channel. In addition, buying wine on SM may require specific application add-ons or redirection to a shopping portal, not just use of existing SM platforms.

7. RESEARCH AGENDA

In this section, we link the concept of the consumer wine cooperative to the current debate in the literature about centralized versus decentralized social media platforms. Several questions arise that open the door for future research opportunities.

Centralized social media platforms like current forms of Facebook and Twitter face many challenges. For example, social media comprises a huge data set that is difficult to process. Data from social media can also be incomplete, unstructured, inaccurate, or even biased (Choi et al., 2020; Stieglitz et al., 2018). More recently, driven by the peer-to-peer electronic exchange system Bitcoin, blockchain technology has emerged (Nakamoto, 2008). Blockchain is commonly regarded as a decentralized ledger or database that stores data immutably and achieves high transparency and reliability of data (Queiroz & Fosso Wamba, 2019; Treiblmaier, 2018). Blockchain is known as a disruptive technology that will potentially revolutionize many business models (Lacity, 2022). For example, blockchain can help trace the origin of food and reveal its details (as Walmart and IBM are exploring). It is already being used to authenticate products (Kshetri, 2018). Blockchain could also revolutionize social media. Choi et al. (2020) explain that, first, the existence of numerous reward systems that use cryptocurrencies could entice more users to engage in social media. Second, it gives users more control over the distribution of data and content. Third, data registered in the blockchain is more authentic, reliable, and secure. Fourth, the identity of creators can be tracked. Thus, the problem of fake data can be addressed.

As we mentioned earlier, social media serves to provide consumers with information to reduce the risks associated with wine purchases. It encourages consumers to pay more for wine that they believe is environmentally sustainable. Decentralized social media platforms based on blockchain can help consumers mitigate further purchasing risks. For example, Alkhudary et al. (2022) looked at what supply chain disruptions could be mitigated by blockchain and how those issues could be

mitigated. They found that blockchain mitigates disruptions related to certain supply and demand risks, namely, behavioral uncertainties, poor information security, fraud and counterfeiting risks, data breaches and human error, operational risks, transactional risks, foodborne illness risks, and information asymmetries.

In addition, we have already mentioned that a wine cooperative needs to build a community of like-minded wine lovers to facilitate experiences that provide gratification to users. Our community-based cooperative model can be further enhanced through blockchain, namely through the use of non-fungible tokens (Alkhudary, Belvaux, et al., 2022; Kshetri, 2022) to further engage consumers in decentralized communities through decentralized and autonomous organizations (DAOs). Further research is needed to determine whether decentralized social media can more effectively reduce consumer risk when purchasing wine online from cooperatives and what types of communities can be created in the wine industry when a decentralized approach is used. In addition, consistent with Talonen et al. (2016), if customers are dissatisfied with the current perceived value of the offering, which is subject to market control, they have the option of using voting mechanisms, which are now possible with smart contracts and DAOs; this needs to be explored in further research.

The future of marketing and its ability to remain relevant not only necessitate a restructuring of itself to portray a mainstream central focus, it also requires that consumer behavior research address problems that are important to marketing (Hunt, 2020). The consumers that become supportive of a wine cooperative has an important role to play in the future development of both marketing theory and practice.

Finally, an SM wine cooperative can only be successful if there is a sufficient number of friends and members for the network to be profitable. At the same time, the cooperative should also build trust with wine producers so that they are willing to supply products to the SM wine cooperative to pass on to the cooperative's customers. However, trust on e-commerce platforms is very complex (Lu et al., 2010). This is because trust can exist in partners (Zaheer et al., 1998) as well as in technology (Mcknight et al., 2011) and the information generated by an information system (Alkhudary & Féniès, 2022; Yavaprabhas et al., 2022). As Batwa and Norrman (2021) explain, blockchain and smart contracts are expected to be highly reliable because they require less human intervention. Smart contracts will also help with data authentication. Future research is needed to determine what types of trust can be strengthened when using decentralized social media platforms in wine cooperatives.

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